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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,686

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EXAMINER

QIN, JIANCHUN

ART UNIT

PAPER NUMBER

2837

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,686	Applicant(s) YOSHISUE ET AL.	
	Examiner JIANCHUN QIN	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

2. Specifically, the specification of the disclosure is objected to because the section heading should appear in upper case without being bracketed. For example, "[Field of the Invention]" should be changed into -- Field of the Invention --, and "[Brief Description

of the Drawings] ” should be changed into -- Brief Description of the Drawings --, etc.

Also, some of the section headings in the specification are not consistent with the lettered items suggested above. Appropriate correction is required. Please visit <http://pair-direct.uspto.gov> to retrieve any US references to see the format in formulating an application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshisue et al. (JP 2004226949, English translation) in view of kido et al. (U.S. Pat. No. 6051307).

Regarding claim 1, Yoshisue teaches a repetition lever for a grand piano (Abstract and Drawings 1 and 4), which performs the operation of pushing up a hammer after the hammer has struck a string, wherein the repetition lever (5) is formed by carbon fiber (Abstract; ¶ 0011, 0014).

Yoshisue does not mention expressly: wherein the repetition lever is formed by a molded article of a thermoplastic resin containing long fibers for reinforcement, the molded article being molded by a long fiber process.

kido et al. teach a technique for forming a molded article of a thermoplastic resin containing long fibers for reinforcement, the molded article being molded by a long fiber process (Abstract; col. 2, lines 40-57).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Yoshisue as taught by kido et al. to form the repetition lever by a molded article of a thermoplastic resin containing long fibers for reinforcement in order to provide a repetition lever excellent in appearance and mechanical strength (kido et al., col. 2, lines 55-57). The mere application of a known technique to a specific instance by those skilled in the art would have been obvious.

Regarding claim 2, Yoshisue does not mention: wherein the long fibers have a length not shorter than 0.5 mm.

The teaching of kido et al. includes: wherein the long fibers have a length not shorter than 0.5 mm (Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Yoshisue as taught by kido et al. to form the repetition lever by a molded article of a thermoplastic resin containing long fibers for reinforcement in order to provide a repetition lever excellent in appearance and mechanical strength (kido et al., col. 2, lines 55-57).

Regarding claims 3-5, Yoshisue teaches: wherein the long fibers are carbon fibers (Abstract); wherein the thermoplastic resin is an ABS resin (¶ 0031 and 0037); and wherein the repetition lever (5) has a reduced cross-sectional area portion for reducing weight thereof (Drawing 4; ¶ 0025).

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Response to Arguments

6. Applicant's arguments received 05/12/08 with respect to claims 1-5 have been considered but they are not persuasive.

In response to Applicant's argument that "Yoshisue's repetition lever 5 is made of a carbon fiber sheet, and is not a synthetic resin containing carbon fibers as argued by the Examiner.", the Examiner corrected an obvious typing error in citing the teaching of Yoshisue in the previous Office action. The Examiner considers that Yoshisue teaches a repetition lever for a grand piano, which performs the operation of pushing up a hammer after the hammer has struck a string, wherein the repetition lever is formed by

Art Unit: 4158

carbon fiber. Yoshisue is not clear that the repetition lever is formed by a molded article of a thermoplastic resin containing long fibers for reinforcement, the molded article being molded by a long fiber process. The combination of Yoshisue with kido's teaching of forming a molded article of a thermoplastic resin containing long fibers for reinforcement by a long fiber process reads on the claim. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Yoshisue as taught by kido et al. to form the repetition lever by a molded article of a thermoplastic resin containing long fibers for reinforcement in order to provide a repetition lever excellent in appearance and mechanical strength (kido et al., col. 2, lines 55-57). The combination is property. The rejection is maintained.

In response to Applicant's argument that "modifying the carbon fiber sheet of Yoshisue, with its bent U-sectioned shape, by kido to be a molded article with thermoplastic resin and carbon fibers would render Yoshisue's action lever unsatisfactory for its intended purpose and change the principle of operation of Yoshisue, both of which are impermissible.", the Examiner considers that the applied prior art references teach all of the claimed elements. The difference between the prior art and the claimed invention is to form the repetition lever by a molded article of a thermoplastic resin containing long fibers for reinforcement. It is the Examiner's position that it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Yoshisue as taught by kido et al. to form the repetition lever by a molded article of a thermoplastic resin containing long fibers for reinforcement since one of ordinary skill in the art would recognize that forming the

repetition lever by a molded article of a thermoplastic resin containing long fibers would streamline manufacturing, provide a repetition lever excellent in appearance and better mechanical strength. Furthermore, it would have been an obvious matter of design choice to adjust the thickness, size or shape of a molded repetition lever on the basis of its suitability for the intended use. A change in size or shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). The Applicant's argument in this regard is therefore not persuasive.

The rest of the Applicant's arguments are reliant upon the issue discussed above, and are deemed to be non-persuasive as well for the reasons provided above.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianchun Qin whose telephone number is (571) 272-5981. The examiner can normally be reached on 8am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on (571) 272-2227.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Art Unit: 4158

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. Q./

Examiner, Art Unit 2837

/Walter Benson/

Supervisory Patent Examiner, Art Unit 2837